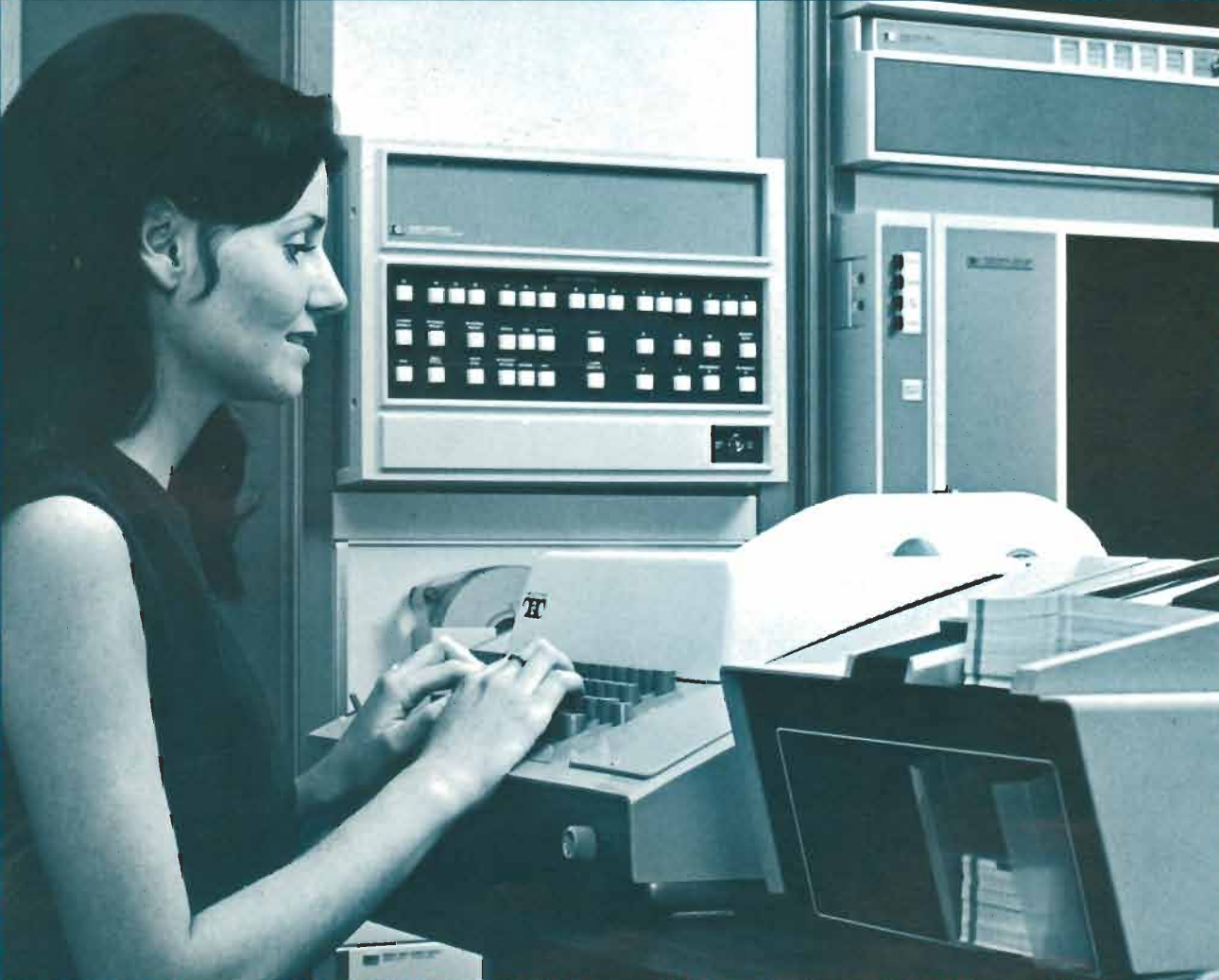




BUFFERED TELEPRINTER INPUT/OUTPUT

2752/2754B TELEPRINTER WITH 12531C INTERFACE KIT



```
5100 IF C=1 THEN 6      6100 GOTO 1990      9001 DATA 3.32433E      9005 DATA .205206,
5200 IF C=2 THEN 7      7000 PRINT "ANGLE"    9002 DATA 5.21470E      9006 DATA .479037,
5900 GOTO 9999          7100 GOTO 1990      9003 DATA 2.55621E      9007 DATA .927508,
6000 PR                 I
2900 NE                V(I)=L(I)
3000 LE                V(2)=(L(3
3100 LE                V(M-1)=(L
3200 LE                V(M)=(L(M
3300 LE                I=1 TO M
3400 FO                L(I)=V(I)
3500 LE                I
3600 NE                M=(M+1)/2
3800 LE                V(2*M)=0
3900 LE                I=1 TO M
4000 FO                T (K-1),V
4100 PR                K
4900 NE                C=C+1
5000 LE                =1 THEN 6
5100 IF                =2 THEN 7
5200 IF                9999
5900 GO                T "ANGLE"
6000 PR                1990
6100 GO                T "ANGLE"
7000 PR                1990
9000 DA                0.2.6822
9001 DA                3.32433E
9002 DA                5.21470E
9003 DA                2.55621E
9004 DA                7.72076E
9005 DA                .205206,
9006 DA                .479037,
9007 DA                .927508,
9008 DA                1.49308,
9009 DA                2.10792,
9010 DA                2.69149,
9011 DA                3.08507,
9012 DATA 3.43948,    9012 DATA 3.43948,    9012 DATA 3.43948,    9012 DATA 3.43948,
9013 DATA 3.69309,    9013 DATA 3.69309,    9013 DATA 3.69309,    9013 DATA 3.69309,
9014 DATA 3.829.3,    9014 DATA 3.829.3,    9014 DATA 3.829.3,    9014 DATA 3.829.3,
9999 END              9999 END              9999 END              9999 END
```

FEATURES

- **COMPLETE INPUT/OUTPUT FUNCTIONS —**
Satisfies the basic needs of communication with the HP computer by combining a typewriter, tape reader, and tape punch in a single unit. Information is input from punched tape or keyboard, and is output as a printed record or recorded on punched tape.
- **ASSEMBLER, FORTRAN, and ALGOL —**
Software supplied includes a driver compatible with Assembly, FORTRAN, and ALGOL programming languages, which makes it easy to program the teleprinter to perform input/output functions for the computer.
- **SIMPLE TO INSTALL —**
Supplied complete — mount teleprinter on stand, plug one interface card into a computer I/O slot, and connect a cable — no expensive and time consuming installation or computer down-time required.



HP 2754 TELEPRINTER

Recommended for heavy-duty applications where usage consistently exceeds five hours per day or thirty hours per week. Has pin-feed platen but all other features, including functions and speed, are the same as the HP 2752 Teleprinter.

HP 2752 TELEPRINTER

for light-duty applications.
(Friction-feed platen.)

ADDING A TELEPRINTER INPUT/OUTPUT TO YOUR HP COMPUTER

Adding a Teleprinter Input/Output to your HP computer gives you a versatile means of communicating with the computer through a typewriter, tape reader, and tape punch, incorporated into a single unit. Teleprinter connection to the computer is easy — merely locate it near the computer, plug one interface card into the computer, and connect the teleprinter cable. The software provided may then be loaded into the computer and the unit is ready for immediate use. The software includes subroutines to simplify programming of the teleprinter plus a binary tape for complete diagnostic checkout of the interface card and the teleprinter.

The hardware provided includes a teleprinter and a single interface card which plugs into any I/O slot in the computer. The interface card includes all control and interrupt logic between the computer and teleprinter. Data is transferred between the computer and interface card in parallel and between the interface card and the teleprinter in bit serial. When using the heavy duty HP 2754 Teleprinter, the computer program can select either or both output devices, i.e., tape punch and/or printer. With the HP 2752 Teleprinter, the tape punch cannot be operated independently of the printer.

PROGRAMMING

The Teleprinter Input/Output may be programmed in Assembly language, FORTRAN, and ALGOL. Programming the unit is easy because HP supplies all the necessary software. Two types of drivers are included in the software supplied. The System Input/Output (SIO) Teleprinter Driver permits data transfer without interrupt control; the Basic Control System (BCS) Teleprinter Driver is for data transfer under interrupt control.

The general form of the three types of programming is shown in the samples below.

ASSEMBLY LANGUAGE PROGRAMMING

Using the SIO Driver

This calling sequence is for data transfer without interrupt control; its general form is:

Operation	Operand
LDA	Buffer length ①
LDB	Buffer address
JSB	Function (10fB,I) ②

① Use positive number for characters, negative number for words.

② JSB 104B,I for Keyboard or Paper Tape Input
JSB 102B,I for List Output

EXAMPLE: Read 72 ASCII characters into 36 consecutive memory locations beginning at the address contained in 'TBLE'.

```

LDA    LENGTH
LDB    TBLE
JSB    104B,I
LENGTH DEC    72
    
```

Using the BCS Driver

This calling sequence is for programs that require data transfer under interrupt control; its general form is:

Operation	Operand
JSB	.IOC.
OCT	Function ①
JMP	Reject address
DEF	Buffer address
DEC	Buffer length ②

① Read ASCII = 10001
Read & Print ASCII = 10401
Read binary = 10101
Read variable length binary = 10301
Write ASCII = 20002
Write binary = 20102

② Use positive number for words, negative number for characters.

EXAMPLE: Read 72 ASCII characters from the teleprinter and store them in 36 consecutive memory locations beginning at address 'TBLE'. If I/O request is rejected, go to address 'REJ'.

```

JSB    .IOC.
OCT    10001
JMP    REJ
DEF    TBLE
DEC    -72
    
```

FORTRAN PROGRAMMING

```

READ } (unit, format) List ①
WRITE }
READ } (unit) List ②
WRITE }
    
```

① For ASCII records

② For binary records

EXAMPLE: Read three values for variables X,Y,Z.

```

READ    (1,100)X,Y,Z
100 FORMAT (3F10.3)
    
```

ALGOL PROGRAMMING

```

READ } (unit, format, list) ①
WRITE }
READ } (unit, list) ②
WRITE }
    
```

① For ASCII records

② For binary records

EXAMPLE: Read three values for variables X,Y,Z.

```

FORMAT F1 (3F10.3)
READ    (1,F1,X,Y,Z)
    
```

SPECIFICATIONS

(The following applies to both HP 2752A and HP 2754B Teleprinters, except as noted.)

TAPE PUNCHING AND READING SPEED

10 characters per second

TYPING SPEED

100 words per minute (maximum)

TAPE CODE

8-channel on 1-inch paper tape

DATA TRANSFER

Bit serial; 8-bit code

PLATEN

2752A: Friction-feed

2754B: Pin-feed

POWER REQUIRED

HP 2752A: 115V, 60 ± 0.45 Hz or 50 ± 0.45 Hz, 230W

HP 2754B: 115V, 60 ± 0.5 Hz, 230W (Consult factory if 50 Hz operation is desired)

(HP 2752A Teleprinter is available with 230V, 50 Hz input; specify if required)

INPUT CURRENT SUPPLIED BY COMPUTER

0.24A (+12V); 0.01A (-12V); 0.05A (-2V); 0.76A (+4.5V)

(Note: An auxiliary HP Power Supply may be necessary for installations which use several I/O devices with high-current requirements. Consult your Hewlett-Packard Field Sales Office.)

OPERATING CONDITIONS

(Limits imposed by paper tape)

Ambient temperature: 10° to 40°C (50° to 104°F)

Relative humidity: 20% to 80%

DIMENSIONS

HP 2752A: 33 inches (838mm) high; 25-1/2 inches (648mm) wide; 18-1/2 inches (470 mm) deep

HP 2754B: 33-1/2 inches (851 mm) high; 40 inches (1016 mm) wide; 24 inches (610 mm) deep

WEIGHT (WITH STAND)

HP 2752A:

Net weight: 77 lb (34,7 kg)

Shipping weight: 92 lb (41,8 kg)

HP 2754B:

Net weight: 225 lb (102 kg)

Shipping weight: 270 lb (123 kg)

EQUIPMENT SUPPLIED

HP 2752A or HP 2754B Teleprinter, includes stand and 16-foot interconnecting cable plus the following:

With each 2752A: one roll paper, 8-1/2 inches wide, 370 feet per roll, HP Part No. 9280-0046, power pack, chad box, copy holder, paper shaft and paper tape spools.

With each 2754B: one box of fanfold paper, 3500 8-1/2 by 11 sheets, Part No. 9280-0705.

One roll paper tape, 1-inch wide, 1000 feet per roll, HP Part No. 9280-0063.

Lubrication Kit, HP Part No. 5080-6610.

(Order extra paper by HP Part No.; discount for large quantities.)

HP 12531C Interface Kit consisting of:

Buffered Teleprinter Interface Card, HPPart No. 02116-6168.

BCS Buffered Teleprinter Driver Tape, Accessory No. 20017C.

SIO Buffered Teleprinter Driver Tape, Accessory No. 20322A (4K Memory) or Accessory No. 20323A (8K Memory), or Accessory No. 20330B (16K Memory).

Buffered Teleprinter Test — Binary Tape, Accessory No. 20417C (2116), 20420B (2114 and 2115), or 24201A (2100).

